



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

FEB 23, 1999

OFFICE OF
SOLID WASTE AND EMERGENCY
RESPONSE

MEMORANDUM

SUBJECT: Guidance Regarding Cathodic Protection Monitoring of ACT-100[®] and ACT-100-U[®] Underground Storage Tanks with Cathodic Protection

FROM: Anna Hopkins Virbick, Director /s/
Office of Underground Storage Tanks

TO: State UST Program Managers
EPA Regional Program Managers

Pursuant to a request from the Steel Tank Institute (STI), the Environmental Protection Agency (EPA) is providing guidance regarding the cathodic protection (CP) monitoring of two underground storage tank (UST) technologies. The ACT-100[®] and, where accepted by implementing agencies according to EPA guidance dated June 25, 1998, ACT-100-U[®] tank technologies meet new tank standards at § 280.20 without the addition of cathodic protection. These tanks are corrosion protected by an external cladding which provides a dielectric barrier between the steel tank and the environment. As long as the integrity of the cladding is maintained, the addition of anodes to these types of tanks at installation provides an additional level of corrosion protection that is beyond the minimum requirements described in the federal regulations.

STI recently published a supplement to the installation instructions dated March 1998 for the ACT-100[®] and ACT-100-U[®] tank technologies (see attachments) that provides specific instructions for attaching factory-attached and field-attached anodes. Factory-attached anodes must be attached per the requirements of the STI-P3[®] specification and weld-on anode core bars must be coated at the factory according to the ACT-100[®] or ACT-100-U[®] specifications. For field-attached anodes, the anode wire must be connected to the lift lug or something which by design is not in contact with stored product. Instructions for wire connections and splices are also included. EPA believes that the installation instruction supplements and specifications ensure the integrity of the cladding is maintained. Historically, the ACT-100[®] specification (as far back as 1989) required complete cladding coverage over the entire tank, any external attachments must be designed in a manner which does not preclude the proper application of the cladding material, and a spark test must be conducted over the entire surface of the tank after application of the cladding.

EPA believes that anytime CP is installed on an UST system, it should be operating properly. However, ACT-100[®] and, where accepted, ACT-100-U[®] tank technologies meet new tank standards without the addition of anodes. In addition, by following STI's March, 1998 installation instructions, tank manufacturers employ good tank management practices by requiring an initial test of the CP system and additional testing when construction or maintenance activity around the tank or anodes takes place.

Based upon the above discussion, EPA believes that monitoring of ACT-100[®] and, where accepted by implementing agencies, ACT-100-U[®] tanks with anodes should not be required. EPA recommends that implementing agencies determine the following for ACT-100[®] and, where accepted by implementing agencies, ACT-100-U[®] tanks:

Periodic monitoring of cathodic protection systems is not required in the following cases:

1. When factory installed anodes are included with a new ACT-100[®] or ACT-100-U[®] installation.
2. When field installed anodes are included with a new ACT-100[®] or ACT-100-U[®] installation.

Note: In cases where cathodic protection is retrofitted to a previously installed ACT-100[®] or ACT-100-U[®] tank, cathodic protection monitoring is required because the status of the cladding cannot be determined.

Please contact Paul Miller of my staff via E-mail at miller.paul@epa.gov or phone at (703) 603-7165 if you have questions regarding this guidance.

Attachments (2)

cc (w/o attachments): Wayne Geyer, Steel Tank Institute
David Wiley, OUST
OUST Management Team
Kathy Nam, OGC